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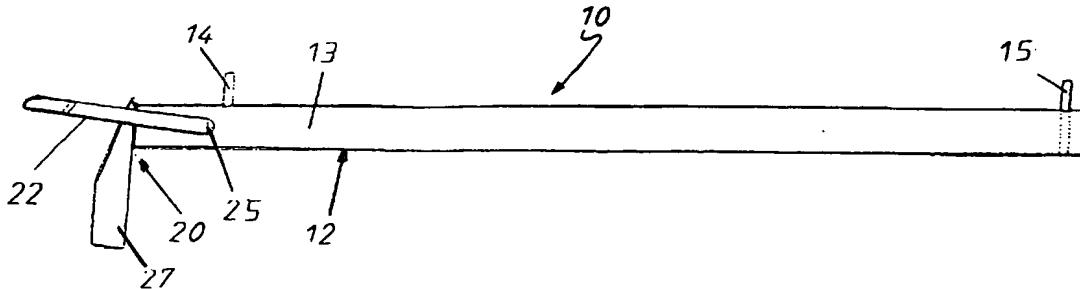
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SUPPORT BRACKET



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(57) Abstract: An article support bracket (10) which can be releasably mounted to a structural member, the bracket (10) including a support section (12) for receiving the article and a releasably mounting means (20) operatively connected to the support section (12), the releasable mounting means (20) being adapted to be secured to the structural member so that in a mounted position the support section (12) is in a selected orientation relative to the structural member.

SUPPORT BRACKET

The present invention relates generally to brackets for supporting articles. One particular application of the invention concerns the support of cable drums and as a matter of convenience the invention will be hereinafter described with reference to that particular application. It is to be understood however that the bracket of the present invention can be used to support other articles.

During the construction of buildings, electric cables need to be laid at desired locations throughout the building. Usually such electric cables are supplied on cable drums from which selected lengths of cable can be taken. This can be a cumbersome process particularly where there is only one person available for laying of the cables.

It is an object of the present invention to provide an improved bracket suitable for supporting articles such as for example, cable drums.

According to one aspect of the present invention there is provided an article support bracket which can be releasably mounted to a structural member, the bracket including a support section for receiving the article and a releasable mounting means operatively connected to the support section, the releasable mounting means being adapted to be secured to the structural member so that in a mounted position the support section is in a selected orientation relative to the structural member.

The support section may be in the form of an elongated arm with the mounting means being disposed at one end portion thereof, so that when the mounting means is connected to the structural member in the mounted position the elongated arm extends away from the structural member.

The elongated arm may include one or more stops thereon for limiting movement of the article along the arm when carried thereon. Preferably, the or each stop is in the form of a pin. Where two stops are provided these are spaced apart.

- 2 -

The structural member may be in the form of a generally upright post and when the bracket is connected to the post in the mounted position the elongated arm is disposed generally horizontally and extends from the post.

In one embodiment the releasable mounting means includes a hook shaped element operatively connected to one end of the arm, the hook shaped element being mounted for pivotal movement relative to the arm between a fitting position in which it is presented to the structural member and the mounted position in which it causes the bracket to be connected to the structural member. Return of the hook shaped element to the fitting position from the mounted position enables release of the bracket from the structural member.

The releasable mounting means may further include a pair of spaced apart locating flanges forming a channel shaped configuration arranged such that in the mounted position, the post is received within the channel shaped configuration with the hook shaped element extending at least partially around the post.

Preferably, the hook shaped element is adapted to be pivotally mounted at selected pivot mountings along the length of the arm at said end portion to allow for the fitting of the brackets to posts of different cross sectional dimensions.

In another embodiment the releasable mounting means may include a pair of spaced apart flanges extending from one end of the arm which when in the mounted position the post is disposed between the flanges with the free ends of each flange extending beyond the post, each flange including a mounting aperture in its free end portion for receiving a mounting pin.

According to another aspect of the present invention there is provided an article support bracket as described above in either its broad or more particular form in combination with a portable structure member, the structural member including a post and

- 3 -

a base, the post being operatively connected to the base, said article support bracket being releasably connectible to the post in the mounted position.

In one form the base may include a mounting adapted to be supported on a ball of a tow bar assembly of a vehicle. In another form the base may include a foldable leg assembly movable between an operative position in which it can support the post for receiving the support bracket and a collapsed position.

According to another aspect of the present invention there is provided an article support device including a post, a base, said post being operatively connected to said base and a support bracket operatively connected to the post for pivotal movement between an operative position in which it extends away from the post and can receive an article thereon and a stored position in which it is disposed adjacent the post.

Preferably the base includes a foldable leg assembly movable between an operative position in which it can support the post and a collapsed position.

Preferred embodiments of the invention will be hereinbefore described with reference to the accompanying drawings, and in those drawings:

Figure 1 is a side elevation of a bracket according to one embodiment of the present invention;

Figure 2 is a plan view of the bracket shown in Figure 1;

Figure 3 is a schematic view of the bracket shown in a mounted position;

Figures 4 and 5 are detailed views of the bracket shown in Figures 1 to 3;

Figure 6 is a schematic view of a bracket according to a further embodiment of the present invention;

- 4 -

Figure 7 is a schematic illustration of a further application of the present invention;

Figures 8 and 9 are schematic views of an attachment for use with a bracket according to the present invention;

Figure 10 is a schematic view of a further attachment for use with the bracket according to the present invention;

Figure 11 is a schematic illustration of a further embodiment according to another aspect of the invention; and

Figure 12 is a partial view of a modification of the embodiment shown in Figure 11.

Referring in particular to Figures 1 to 5 there is shown a bracket generally indicated at 10 which can be releasably secured to a structural member such as a wall frame stud 60 (Figure 3). The bracket comprises a support section 12 in the form of an elongated rod shaped arm 13. In the form shown the arm includes locating pins 14 and 15 thereon between which an article to be carried by the bracket can be positioned. In another form the inner pin 14 is omitted and the article is located between the outer pin 15 and the stud 60. The article may be in the form of a cable drum 70 as shown in Figure 3.

The bracket 10 further includes releasably retaining means 20 which includes a hook shaped element 22 having a mouth 23 with the hook shaped element 22 being pivotally mounted to the arm 13. As shown the hook shaped element can be pivotally mounted at either pivot mounting 24 or pivot mounting 25 so that it can be adapted for use with different sized structural member. The hook shaped element 22 is retained in position by means of spring clip 28. The retaining means 20 further includes spaced apart locating flanges 26, 27 which form a channel which faces the mouth of the hook shaped element.

As illustrated in Figure 3, the bracket 10 can be mounted to a structural member

- 5 -

which may for example be a wall frame stud 60 and in the application shown in Figure 3, the bracket is adapted to support a cable drum 70 thereon. The bracket is fitted by locating the hook shaped element around the stud 60 with the flanges having the other side of the stud positioned therebetween. Fitting of the clamp is effected by turning the arm 13 at 90° to the hook shaped member 22 whereby the hook shaped member can be appropriately located around the stud 60 whereafter the arm 13 can be pivotally returned to the position shown in Figure 3 and thereby be retained in a general horizontal position.

A further embodiment of clamp is shown in Figure 6 in this embodiment the clamp 10 is similar to the first embodiment in that it comprises a support section 12 in the form of an arm 13 having pins 14 and 15 thereon. In another form only a single outer pin 15 is provided there being no inner pin 14. In this embodiment the releasable retaining means 20 comprises a pair of spaced apart flanges 32 and 34 which can extend to either side of the wall frame stud 60 with the free ends thereof extending beyond the wall stud. Apertures 36 are provided in the portions of the flanges for receiving a locking pin 35.

As can be seen in Figure 7, the brackets can be used to support a platform 72 upon which tools such as power saw 73 or other equipment or articles can be carried.

Figures 8 and 9 show an attachment which is suitable for use with the bracket 10, the attachment being adapted to be fitted to a vehicle tow bar 48 having a ball 49. The attachment includes a post 42 and a socket section 41 for receiving the ball 40 of the tow bar assembly. Locking nut 45 retains the post in position on the tow bar. The post in this embodiment forms the structural member to which the bracket is attached.

Figure 10 illustrates a further attachment in the form of a carriage comprising a base frame 51 having ground engaging wheels 56. The carriage 50 further includes a post mounting tube 53 which is pivotally mounted to the base frame 51 for receiving a structural member in the form of a post 52 therein, a locking nut 54 retains the post in position. The bracket 10 can be fitted to the post 52 in a manner described earlier.

- 6 -

Referring to Figure 11 there is shown an article support device which includes a post 65 having a support arm 84 pivotally mounted thereto via pivot mounting 61 for pivotal movement about pivot point 64. The device further includes a base including foldable leg assembly which includes a sleeve 82 slidable along the post 65, a plurality of legs 78 connected to the sleeve 67 by connecting links 67. The legs 78 include extendable end sections 80.

Figure 12 shows part of the support device of Figure 11 except that support arm 84 has been replaced by support bracket 10 of the type described earlier.

Finally, it is to be understood that various alterations, modifications and/or additions may be incorporated into the various constructions and arrangements of parts without departing from the spirit or ambit of the invention.

THE CLAIMS:

1. An article support bracket which can be releasably mounted to a structural member, the bracket including a support section for receiving the article and a releasable mounting means operatively connected to the support section, the releasable mounting means being adapted to be secured to the structural member so that in a mounted position the support section is in a selected orientation relative to the structural member.
2. A bracket according to claim 1 wherein the support section is in the form of an elongated arm, said mounting means being disposed at one end portion thereof, so that when the mounting means is connected to the structural member in the mounted position the elongated arm extends away from the structural member.
3. A bracket according to claim 2 wherein the elongated arm includes one or more stops thereon for limiting movement of the article along the arm when carried thereon.
4. A bracket according to claim 3 wherein the or each stop is in the form of an upstanding spaced apart pin.
5. A bracket according to any preceding claim wherein the structural member is in the form of a generally upright post and when the bracket is connected to the post in the mounted position the elongated arm is disposed generally horizontally and extends from the post.
6. A bracket according to any one of claims 2 to 5 wherein the releasable mounting means includes a hook shaped element operatively connected to one end of the arm, the hook shaped element being mounted for pivotal movement relative to the arm between a fitting position in which it is presented to the structural member and the mounted position in which it causes the bracket to be connected to the structural member, and return of the hook shaped element to the fitting position from the mounted position enables release of the bracket from the structural member.

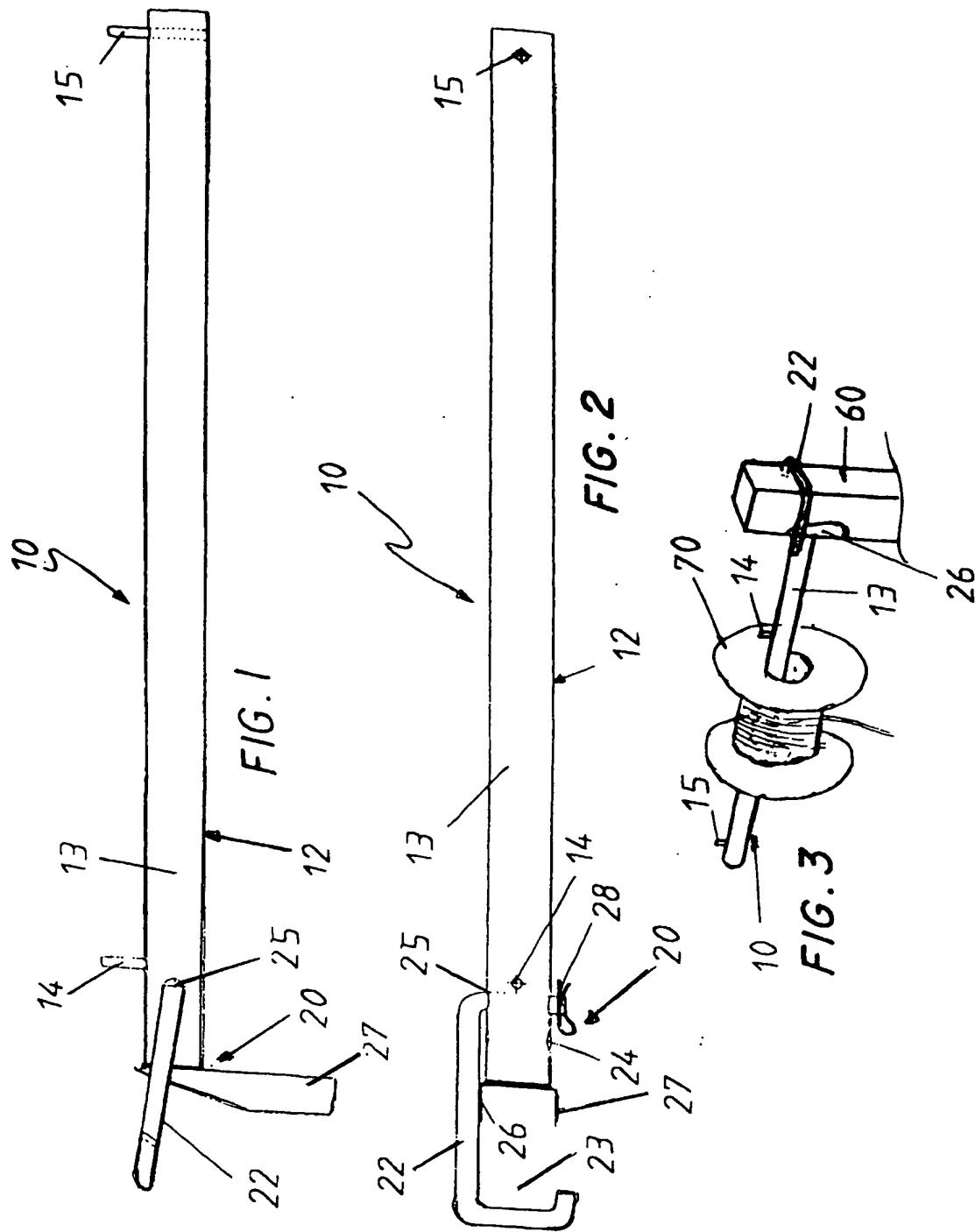
- 8 -

7. A bracket according to claim 6 wherein the releasable mounting means further includes a pair of spaced apart locating flanges forming a channel shaped configuration arranged such that in the mounted position, the post is received within the channel shaped configuration with the hook shaped element extending at least partially around the post.
8. A bracket according to claim 6 or claim 7 wherein the hook shaped element is adapted to be pivotally mounted at selected pivot mountings along the length of the arm at said end portion to allow for the fitting of the brackets to posts of different cross sectional dimensions.
9. A bracket according to any one of claims 1 to 5 wherein the releasable mounting means includes a pair of spaced apart flanges extending from one end of the arm which when in the mounted position the post is disposed between the flanges with the free ends of each flange extending beyond the post, each flange including a mounting aperture in its free end portion for receiving a mounting pin.
10. An article support bracket according to any preceding claim in combination with a portable structure member, the structural member including a post and a base, the post being operatively connected to the base, said article support bracket being releasably connectible to the post in the mounted position.
11. The combination of claim 10 wherein said base includes a mounting adapted to be supported on a ball of a tow bar assembly of a vehicle.
12. The combination of claim 10 wherein said base includes a frame having ground engaging wheels enabling the structural member to be moved over a support surface.
13. The combination of claim 10 wherein said base includes a foldable leg assembly movable between an operative position in which it can support the post for receiving the support bracket and a collapsed position.

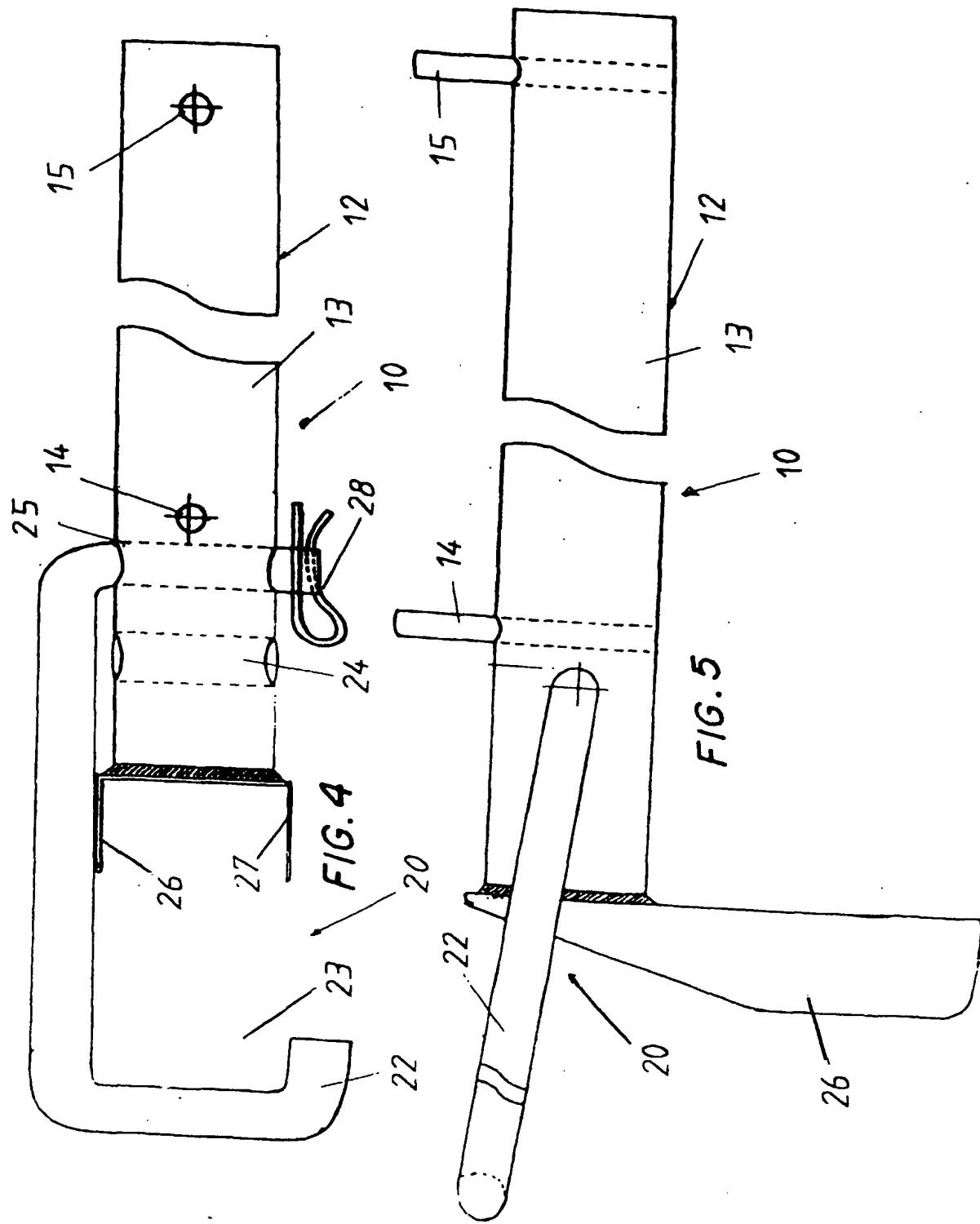
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14. An article support bracket substantially as hereinbefore described with reference to the accompanying drawings.

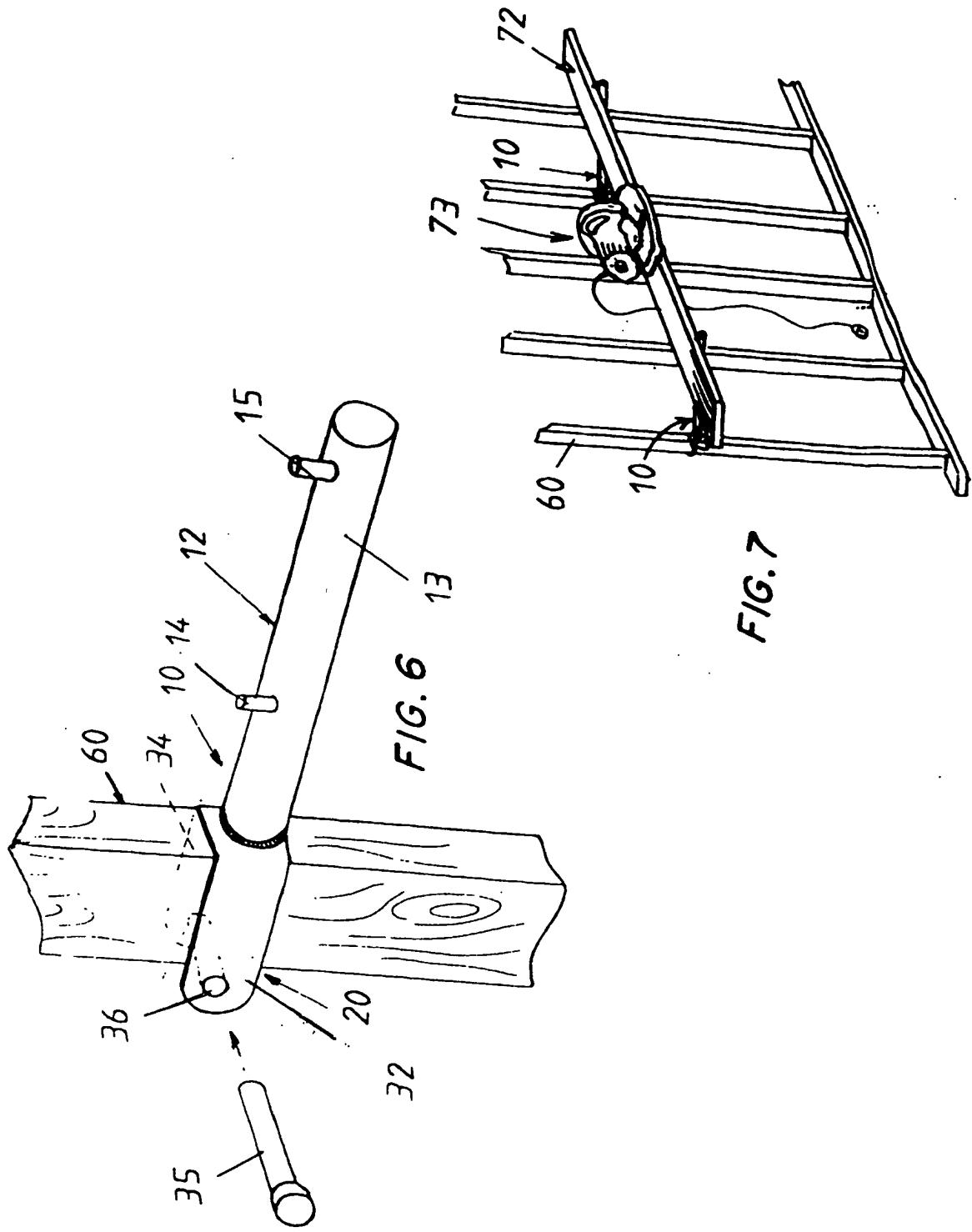
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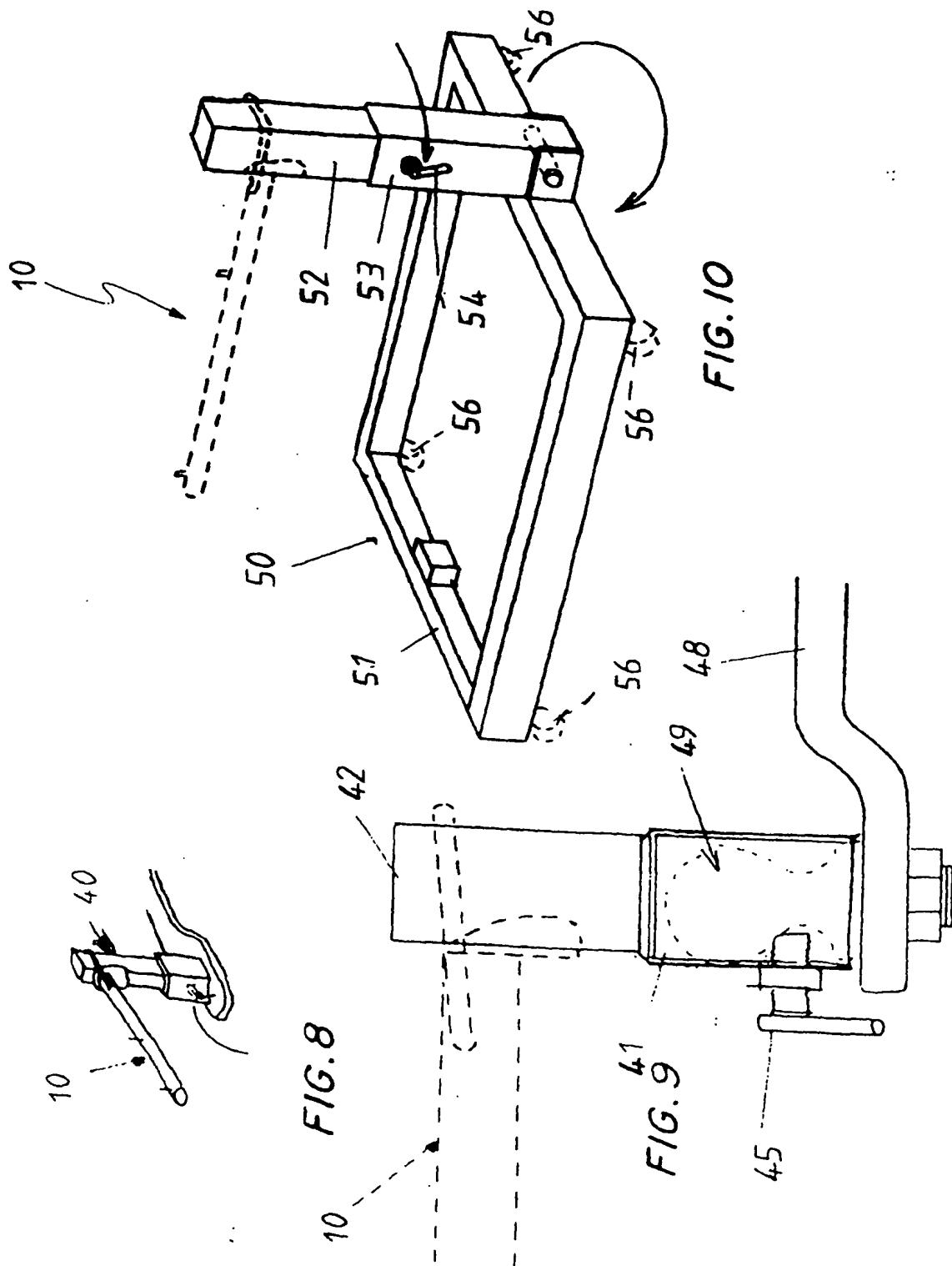
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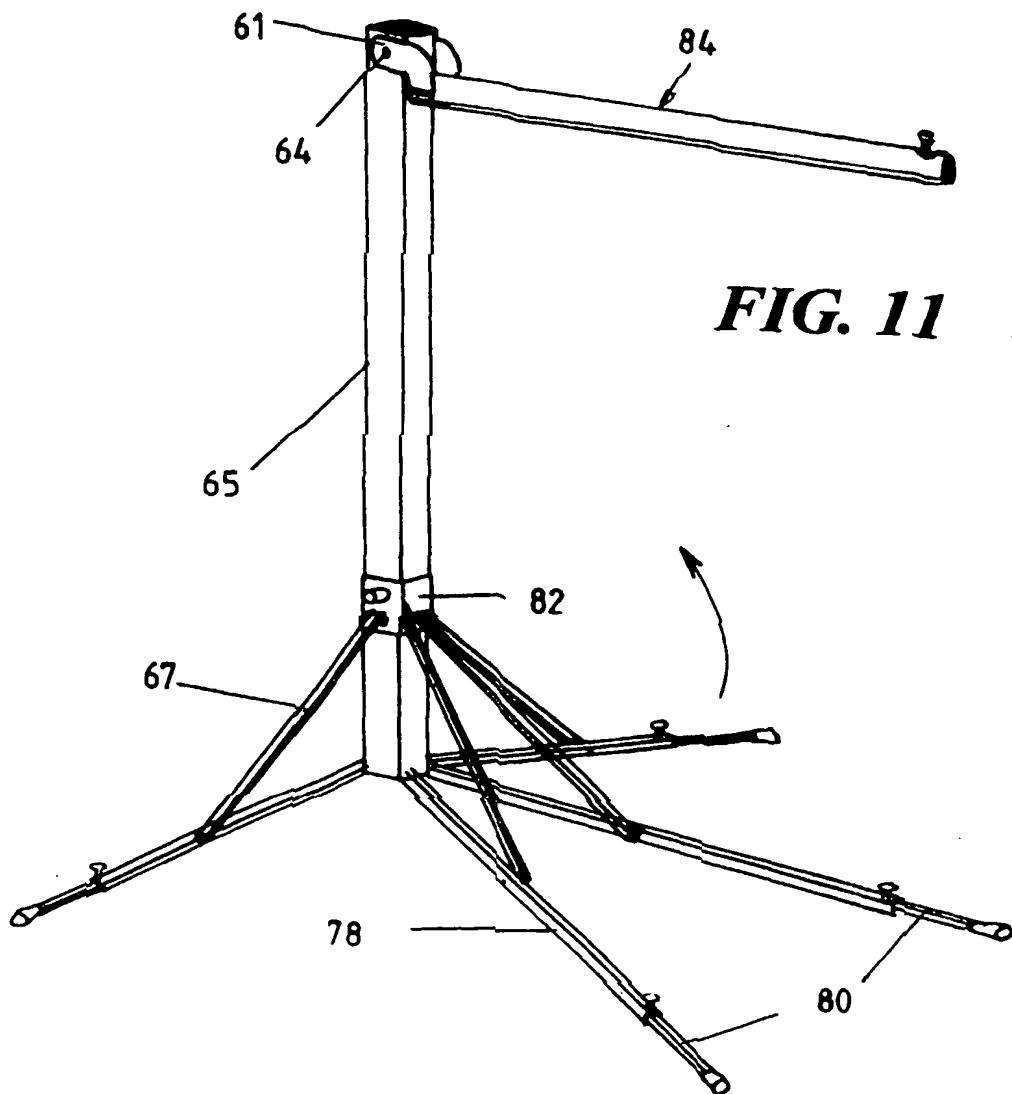
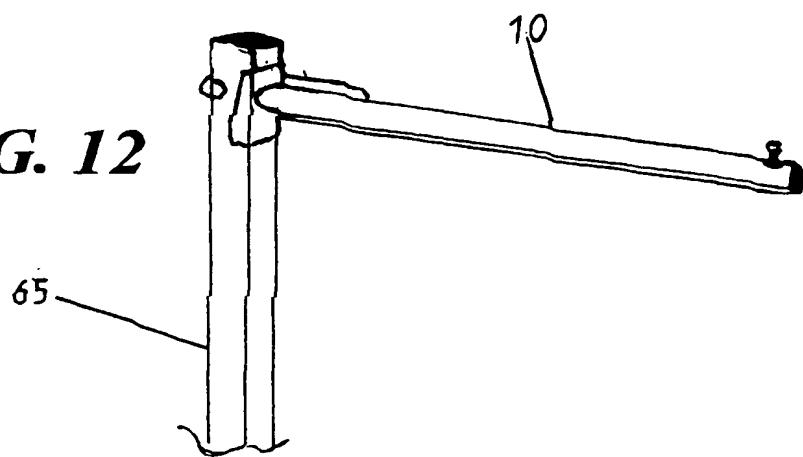
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**FIG. 12**

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000510

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. 7: A47B 96/06, F16M 13/02		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI IPC F16M 13/(all) with keywords (bracket, releasable, post)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	AU 200237018 (752963) B1 (TREACEY) 3 October 2002 Whole document	1-4, 6-7, 14
X	AU 54665/96 (677359) B (FOSTER) 17 April 1997 Whole document	1-5, 10-14
X	US 4172579 A (STEINMAN) 30 October 1979 Whole document	1-5, 9-14
X	GB 934767 A (IRVING) 21 August 1963 Whole document	1-4, 14
<input type="checkbox"/> Further documents are listed in the continuation of Box C		<input checked="" type="checkbox"/> See patent family annex
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 7 May 2004		Date of mailing of the international search report 13 MAY 2004
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer ZBIGNIEW BIELAWSKI Telephone No : (02) 6283 2218

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000510

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
AU 200237018	
AU 5466596	
US 4172579	

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX